

**REMARKS**

Claims 1-13 and 18-20 have been examined. Claims 1-13 and 20 have been rejected under 35 U.S.C. § 112, first and/or second paragraph, and claims 1 and 6-9 have been rejected under 35 U.S.C. § 102(e). Also, the Examiner indicates that claims 2-5, 11-13, and 18-20 contain allowable subject matter.

**I. Preliminary matters**

The Examiner has not yet indicated acceptance of the drawings filed on April 4, 2002. Applicants respectfully request acknowledgement, as originally requested with the submission of the drawings.

**II. Rejections under 35 U.S.C. § 112, first paragraph**

Claim 20 has been rejected under 35 U.S.C. § 112, first paragraph, because the specification allegedly does not teach one skilled in the art how to make or use the invention. In particular, the Examiner states that:

It is not understood what the "program" in claim 20 is and how this program can perform the method comprising the writing step and the selecting step as recited in claim 20 since the present specification does not show the detailed structure of the program and explain how this program can perform the reciting steps.

Applicants respectfully submits that the specification clearly enables one skilled in the art to practice the invention recited in claim 20. Also, Applicants incorporates the arguments contained in the Amendment filed on November 26, 2003, and provides the following discussion to assist the Examiner's understanding.

An illustrative, non-limiting embodiment of the program of claim 20 is shown in Figs. 5 and 6. For example, the decision control system 61 (which may constitute at least part of the CPU 112 shown in Fig. 7) determines if all of the ink cartridges 9 installed in the cartridge holder 8 have the same type of ink. (Operation S13). If all of the cartridges 9 have the same ink type (operation S13: Yes), the decision control system 61 determines whether or not the adaptive ink type of the printer has been determined. (Operation S14). In one example, the system 61 determines whether or not the adaptive ink type of the printer has been determined by evaluating the information stored in the ink type storage system 63. (Page 28, line 22, to page 29, line 2).

If the adaptive ink type of the printer has not yet been determined (operation S14: No) and if the condition in operation S15 is satisfied, the decision control system 61 sets the adaptive ink type of the printer. (Operation S16). Specifically, in operation S16, the decision control system 16 transmits information regarding the type of ink the cartridges 9 to the ink type storage system 63, and the ink type information is written in a memory in the ink type storage system 63. (Page 29, line 23, to page 30, line 1).

Accordingly, Fig. 6 clearly supports the program recited in claim 22, which writes a specific ink type into a memory area of a printer memory (e.g. into a memory area of the ink type storage system 63) when all ink cartridges attached to a printer contain ink of the same ink type (e.g. Fig. 6: operation S13: Yes) and when the specific ink type has not yet been written in the memory area of the printer memory (e.g. Fig. 6: operation S14: No).

Also, in operation S16, the decision control system 16 sets parameters for the operation sequence setting system 64, the head driving condition setting system 65, and the image processing condition setting system 66 shown in Fig. 5. (Page 30, lines 4-7). For example, as

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described with respect to the non-limiting embodiment, in the operation sequence setting system 64, parameters for a periodic flashing interval, the amount of discharge of an ink drop, and the amount of suction during a cleaning operation are set based on the type of ink in the ink cartridges 9. (Page 25, line 22, to page 26, line 1). Also, in the head driving condition setting system 65, parameters for a driving voltage and a driving frequency are set based on the type of ink in the ink cartridges 9. (Page 26, lines 1-5). Also, in the image processing condition setting system 66, parameters are set based on the type of ink in the ink cartridges 9. (Page 26, lines 5-8).

Accordingly, the specification clearly supports the program recited in claim 22, which selects an operation sequence condition, a recording head driving condition, and an image processing condition corresponding to the specific ink type.

In light of the discussion above, Applicants submit that claim 20 satisfies the requirements of 35 U.S.C. § 112, first paragraph.

**II. Rejections under 35 U.S.C. § 112, second paragraph**

Claims 1-13 and 20 have been rejected under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite.

**A. Claim 1**

The Examiner contends that claim 1 is not clear because the claim does not recite structure that decides whether or not ink type information has already been set and that sets the ink type information. Applicants submit that the amendments to claim 1 overcome the rejection.

**B. Claims 2-10**

Applicants submit that the rejection of claims 2-10 are overcome for reasons that are the same as or similar to the reasons why the rejection of claim 1 is overcome.

**C. Claims 11-13**

Since the Examiner has not provided any reasons why claims 11-13 are allegedly indefinite under 35 U.S.C. § 112, second paragraph, and since the Examiner has indicated that claims 11-13 are allowed on page 4 of the Office Action, Applicants assume that the Examiner did not intend to reject these claims.

**D. Claim 20**

Applicants submit that the rejection of claim 20 is overcome in light of the discussion above with respect to the rejection under 35 U.S.C. § 112, first paragraph.

**III. Rejection under 35 U.S.C. § 102(e) over U.S.P. 6,533,383 to Saurita et al. ("Saurita")**

Claims 1 and 6-9 have been rejected under 35 U.S.C. 102(e) as being anticipated by Saruta. Applicants respectfully traverse the present rejection for at least the following reasons.

**A. Claim 1**

As recited in claim 1, a control circuit decides whether or not an ink type information to be used in the recording apparatus has already been set when the ink cartridge is attached to the cartridge holder. On the other hand, Saruta does not disclose or suggest the feature above.

For example, Saruta discloses an ink jet printing apparatus which has a control means 46 that can identify a plurality of ink cartridges and count how many times data is written in a memory device of a particular cartridge. Also, the control means 46 can write data in the

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memory corresponding to the number of times data is written in the memory device. (Column 9, lines 7-11). The control means 46 also can operate a suction control means 47 and a pump drive means 48 to active pumps 23a and 23b to supply ink from a particular cartridge to a print head 17. (column 9, lines 25-28).

The control means 46 also calculates the amount of ink supplied from the cartridge, and a residual ink amount detection and judgment means 51 stores this calculated amount as data representing a consumed ink amount. (Column 9, lines 29-34). The control means 46 writes data representing the consumed ink amount stored in the residual ink amount detection and judgment means 51 in a semiconductor storage area 27 and 32 of the respective ink cartridges 1 and 2.

Therefore, while Saruta discloses determining the amount of ink that has been consumed for a respective cartridge, nowhere does Saruta disclose a control circuit that decides whether ink type information has already been set, as set forth in claim 1.

In addition, claim 1 also states that the control circuit sets the ink type information when the ink type information has not yet been set. Since Saruta does not mention setting ink type information, Saruta clearly does not teach setting ink type information when the ink type information has not yet been set.

Based on the foregoing, Applicant respectfully requests the Examiner to reconsider and withdraw the rejection of claim 1.

**B. Claims 6-9**

Since claims 6-9 depend upon claim 1, Applicants submit that they are patentable at least by virtue of their dependency.

**IV. Allowable subject matter**

**A. Claims 2-5 and 20**

The Examiner has indicated that claims 2-5 and 20 would be allowable if they are rewritten in independent form and if the rejections under 35 U.S.C. § 112 are overcome. Since the rejections under 35 U.S.C. § 112 have been overcome and since the prior art rejection of claim 1 has been overcome, Applicants submit that claims 2-5 and 20 are allowable.

**B. Claims 11-13 and 18-19**

The Examiner has allowed Claims 11-13 and 18-19.

**V. Newly added claims**

Applicants have added new claims 21-48 to provide more varied protection for the invention.

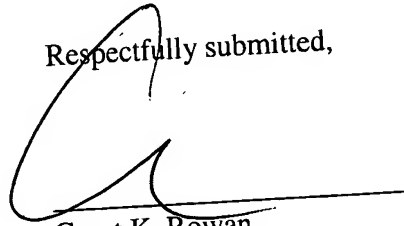
**VI. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Grant K. Rowan  
Registration No. 41,278

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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